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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,613	04/16/2004	Seth A. Miller	TI-36350 (032350.B601)	1325

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EXAMINER

CAMERON, ERMA C

ART UNIT	PAPER NUMBER
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1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/826,613

Applicant(s)

MILLER, SETH A.

Examiner

Erma Cameron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8,9,11-14,17,18 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-6, 8-9, 11-14, 17-18, 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-2, 5-6, 8-9, 11-14, 17-18 and 20-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following are not well described and/or defined in the specification:

- c) 7:18+21, 9:6-7, 20:6+8 - n and m and D have not been defined.

The applicant's assertion in the 1/17/2007 amendment that n, m and D are not important to understanding the invention is not found persuasive. It is the examiner's opinion that understanding the chemical entities involved in the claimed invention is vital to understanding the claimed invention.

- e) In the Figures, it is not clear if the O's above the surface are supposed to be oxygen atoms, and if so, how they are attached to the surface.

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Applicant's assertion that one with training in chemistry would understand how oxygen atoms are attached is not found to be a persuasive argument. Too much is expected of the reader to supply undisclosed information.

3. The rejection of Claims 10 and 22 under 35 U.S.C. 112, first paragraph, is withdrawn because of the amendment filed 1/17/2007.

4. The rejection of Claims 1, 13 and 25 under 35 U.S.C. 112, first paragraph, ("reactive group"), is withdrawn because of the amendment filed 1/17/2007.

5. The rejection of Claim 13 under 35 U.S.C. 112, first paragraph, ("metalloid") is withdrawn because of the amendment filed 1/17/2007.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. The rejection of Claims 1-3, 5-6, 8-15, 17-18 and 20-26 under 35 U.S.C. 112, second paragraph, is withdrawn because of the amendment filed 1/17/2007.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 5-6, 8-9, 11-14, 17-18 and 20-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ogawa et al (US2001/0031364).

'364 teaches applying TEOS [0082] or other alkoxysilanes to substrates such as glass, metal, ceramic and the other materials of [0084], followed by a fluoroalkyl trimethoxysilane as in [0145]. "...the fluoroalkyl trimethoxy silane compound underwent a dealcoholization reaction with the adsorbing water and the OH groups present at the surface of the silica-based coating film, forming covalent bonds through siloxane bonds." [0146]. The trimethoxy groups can be seen in the Figures to hydrolyze to an alcohol, and react with the TEOS on the substrate to form a water repellent fluorine-containing coating [0136] [0153]. The fluorine containing film 13 of Figure 5 is reacted with the siloxane film 12 formed from the TEOS [0147] [0148]. The methanol in the solution is removed by heating to 120-150 degrees C [0146], thus meeting the limitations of claim 22. If the applicant considers their coating, formed in a two-step process, to be a monolayer, then the coating of '364 may also be considered a monolayer, as it is formed in the same two step process.

Response to Arguments

Regarding applicant's argument that a second film is formed over a first film, the examiner disagrees. The Figures and statements in [0146] clearly indicate that the silane compound has reacted with the coating formed from the TEOS to form a new film. ("...the fluoroalkyl trimethoxy silane compound underwent a dealcoholization reaction with the absorbing water and the OH groups present at the surface of the silica-based coating film, forming covalent bonds through the siloxane bonds..." [0146]. There are not two independent films, but rather one film formed from covalent bonds as shown in Figure 5.

10. Claims 1-2, 5-6, 8-9, 11-14, 17-18 and 20-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 1153740.

'740 teaches applying TEOS [0089] (see Figures) or other alkoxysilanes to substrates such as glass, metal, ceramic and the other materials of [0104], followed by a fluoroalkyl trimethoxysilane as in [0130] or a trichlorosilane as in Example 1. The groups can be seen in Figure 1 to hydrolyze to an alcohol, and react with the TEOS on the substrate to form a water repellent fluorine-containing coating (see Abstract). The coating is heated after it is created [0114], thus meeting the limitations of claim 22. If the applicant considers their coating, formed in a two-step process, to be a monolayer, then the coating of '740 may also be considered a monolayer, as it is formed in the same two step process.

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Response to Arguments

Regarding applicant's argument that Figure 1b) does not show bonds, Figure 1c) shows these bonds. Also see Figures 18 a) to e).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ERMA CAMERON
PRIMARY EXAMINER

Erma Cameron
Primary Examiner
Art Unit 1762

March 30, 2007